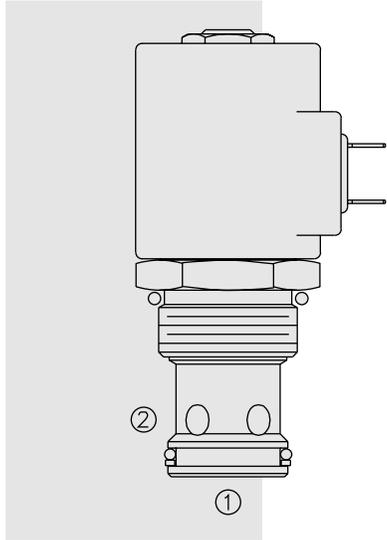


# SOLENOID VALVES

## SV16-20 Poppet, 2-Way, Normally Closed



### DESCRIPTION

A solenoid-operated, 2-way, normally closed, poppet-type, screw-in hydraulic cartridge valve, designed to function as a load holding or blocking valve in applications requiring low internal leakage.

### OPERATION

When de-energized, the **SV16-20** acts as a check valve, allowing flow to pass from ① to ②, while blocking flow in the reverse direction.

When energized, the poppet lifts to open the ② to ① flow path. In this mode, flow from ① to ② is severely restricted. If this path is required, see model SV16-22, page 1.046.1.

**Operation of Manual Override Option:** To override, push button in, twist counter-clockwise 180° and release. In this position, the valve will remain open.

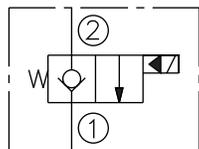
To return to normal operation, push button in, twist clockwise 180° and release. Override will be detented in this position.

### FEATURES

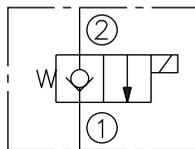
- Continuous-duty rated solenoid.
- Hardened seat for long life and low leakage.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Manual override option.
- Optional waterproof E-Coils rated up to IP69K.
- Unitized, molded coil design.
- Industry common cavity.

### SYMBOLS

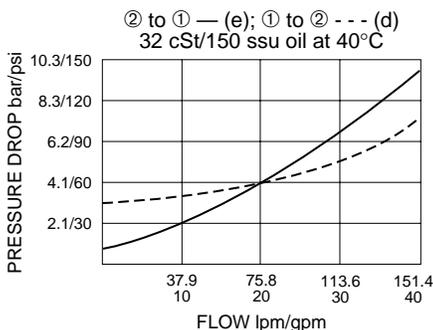
#### USASI:



#### ISO:



### PERFORMANCE (Cartridge Only)



### RATINGS

**Operating Pressure:** 207 bar (3000 psi); Note: Under certain operating conditions this valve may be rated for higher operating pressures. Consult factory.

**Proof Pressure:** 390 bar (5700 psi)

**Flow:** See Performance Chart

**Internal Leakage:** 0.35 cc/minute (7 drops/minute) max. at 207 bar (3000 psi)

**Temperature:** -40 to 120°C with standard Buna seals

**Coil Duty Rating:** Continuous from 85% to 115% of nominal voltage

**Initial Coil Current Draw at 20°C:** Standard Coil: 1.67 amps at 12 VDC; 0.18 amps at 115 VAC (full wave rectified). E-Coil: 2.0 amps at 12 VDC; 1.0 amps at 24 VDC

**Minimum Pull-in Voltage:** 85% of nominal at 207 bar (3000 psi)

**Filtration:** Recommend 25µ nominal or better; See page 9.010.1

**Fluids:** Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)

**Installation:** No restrictions; See page 9.020.1

**Cavity:** VC16-2; See page 9.116.1

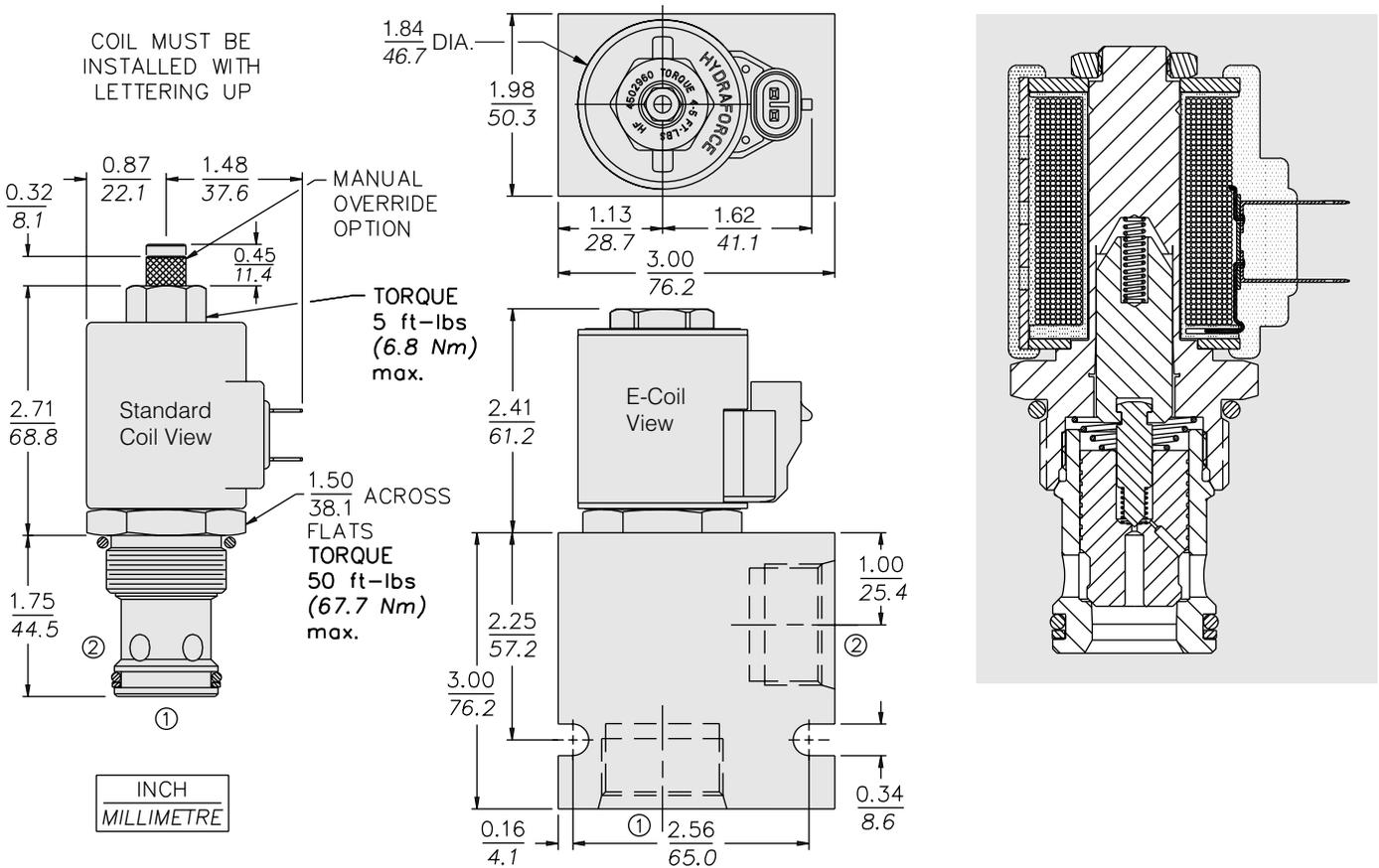
**Cavity Tool:** CT16-2XX; See page 8.600.1

**Seal Kit:** SK16-2X-T; See page 8.650.1

**Standard Coil Nut:** Part No. 7004406

**E-Coil Nut:** Part No. 4502960

**DIMENSIONS**



**MATERIALS**

**Cartridge:** Weight: 0.31 kg. (0.69 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-up standard.

**Standard Ported Body:** Weight: 0.57 kg. (1.25 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); See page 8.016.1. Steel bodies available; consult factory.

**Standard Coil:** Weight: 0.27 kg. (0.60 lbs.); Unitized thermoplastic encapsulated. Class H high temperature magnetwire; See page 3.200.1

**E-Coil:** Weight: 408 g. (14.4 oz.); Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors; **Note:** See page 3.400.1 for all E-Coil retrofit applications.

**TO ORDER**

**SV16-20**

<b>Option</b>		<b>Voltage</b>	<b>Termination (VDC)</b>
None (Blank)		<b>0</b> Less Coil**	<b>Std. Coil</b>
Manual Override	<b>M</b>	<b>10</b> 10 VDC <sup>†</sup>	<b>DS</b> Dual Spades
Manual Override	<b>Y</b>	<b>12</b> 12 VDC	<b>DG</b> DIN 43650
Manual Override	<b>J</b>	<b>24</b> 24 VDC	<b>DL</b> Leadwires (2)
For Manual Override options see page 1.001.1		<b>36</b> 36 VDC	<b>DW</b> Leads w/Weatherpak® Connectors
		<b>48</b> 48 VDC	
<b>Porting</b>		<b>110</b> 110 VDC	<b>Termination (VAC)</b>
Cartridge Only	<b>0</b>	<b>24</b> 24 VAC	<b>Std. Coil</b>
SAE 12	<b>12T</b>	<b>115</b> 115 VAC	<b>AG</b> DIN 43650
SAE 16	<b>16T</b>	<b>230</b> 230 VAC	<b>AP</b> 1/2 in. Conduit
3/4 in. BSP*	<b>6B</b>		<b>Termination (VDC)</b>
1 in. BSP*	<b>8B</b>		<b>E-Coil</b>
*BSP Body; U.K. Mfr. Only		<b>Voltage E-Coil</b>	<b>ER</b> Deutsch DT04-2P (IP69K Rated)
<b>Seals</b>		<b>12</b> 12 VDC	<b>EY</b> Metri-Pack® 150 (IP69K Rated)
Buna N (Std.)	<b>N</b>	<b>24</b> 24 VDC	
Fluorocarbon	<b>V</b>		

\*\*Includes Std. Coil Nut  
<sup>†</sup>Available only with DS, DW or DL terminations